

CLAIMS

C 1 Sub B2  
5 1. Ultra high molecular weight polyethylene molded articles having molecular orientation or crystal orientation.

Sub B2  
10 2. The molded articles of Claim 1, wherein the ultra high molecular weight polyethylene having molecular orientation or crystal orientation is crosslinked slightly.

Sub D2  
15 3. The molded articles of Claim 1 or 2, wherein a melting point of the ultra high molecular weight polyethylene molded article is 135° to 155°C.

Sub B3  
20 4. Artificial joints comprising the molded article of any one of Claims 1 to 3.

Sub C2  
25 5. A method for producing an ultra high molecular weight polyethylene molded article having molecular orientation or crystal orientation, wherein the ultra high molecular weight polyethylene molded article is crosslinked slightly by irradiating a high energy ray and introducing a very small amount of crosslinking points into molecular chains, and the crosslinked ultra high molecular weight polyethylene molded article is compression-deformed after heating up to a compression deformable temperature and then cooled with keeping the deformed state.

30 6. The method of Claim 5, wherein the high energy ray is a radioactive ray and a dose of the irradiation is 0.01 to 5.0 MR.

Sub D4  
Sub B4 D5  
35 7. The method of Claim 5 or 6, wherein the compression-deformable temperature is a temperature in the range of a melting point of the crosslinked ultra high molecular weight polyethylene minus 50°C to the melting

point plus 80°C.

Sub  
D6

8. The method of <sup>claim 5 or 6</sup>~~Claim 5, 6 or 7~~ wherein a weight-average molecular weight of the ultra high molecular weight polyethylene before irradiation is 2 to 8 million.

add B5

add C4

add E1